

MANUFACTURE OF THIN-FILM TRANSISTOR (61-078165)**Publication Number:** JP 61078165 A , April 21, 1986**Inventors:**

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- R011 (LIQUID CRYSTALS)
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Abstract:

PURPOSE: To manufacture a thin-film transistor capable of lowering threshold voltage by laminating and forming a gate electrode film, an silicon nitride film, a semiconductor film and a drain electrode film and a source electrode film brought into contact with the semiconductor film onto an silicon oxide film on a substrate to which the silicon oxide film is coating-treated through a DIP method.

CONSTITUTION: A glass substrate 10 is dipped in a dipping liquid for shaping SiO₂, and the substrate is thermally treated in an oxygen atmosphere to form a film. A gate electrode 17 consisting of a two layer film of gold and chromium is shaped onto an SiO₂ film 121 on a gate line 16 through evaporation-etching, and an Si₃N₄ film 122 is applied and formed. An amorphous silicon film 13 is applied and shaped onto the gate electrode films 14... only through the Si₃N₄ film, and aluminum is evaporated and etched to form the drain line 14 and the gate oxide film 13. Accordingly, transparent electrodes 11... composed of ITO and an orientated film 18 are shaped to a thin-film transistor constituted onto the first glass substrate 10 while a common electrode 21 and an orientated film 28 are formed onto a second glass substrate 20. (From: *Patent Abstracts of Japan*, Section: E, Section No. 431, Vol. 10, No. 248, Pg. 153, August 26, 1986)

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